

## REMARKS

This application is under final rejection. Applicant has presented arguments hereinbelow that Applicant believes should render the claims allowable. In the event, however, that the Examiner is not persuaded by Applicant's arguments, Applicant respectfully requests that the Examiner enter the amendment to clarify issues upon appeal.

This Amendment is in response to the Office Action dated August 21, 2003. Claims 1-22 are pending. Claims 1-22 are rejected. Claims 2-3, 5-6, 8-9, 11-12, 14-15, and 17-18 have been amended. Claims 1, 4, 7, 10, 13, 16, and 19-22 have been canceled. Claims 23-25 have been added. Accordingly, claims 2-3, 5-6, 8-9, 11-12, 14-15, 17-18, and 23-25 remain pending in the present application.

Claims 3-5 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim should refer to other claims in the alternative only. Claims 3 has been amended accordingly. The examiner's objection is thus traversed.

Claims 1-22 are rejected under 35 USC 103(a) as being unpatentable over Haderle et al. (6,185,699) in view of Watts et al. (6,275,832). Claims 1, 4, 7, 10, 13, 16, and 19-22 have been canceled. Their rejection is thus moot. Per the remaining pending claims, the examiner states:

As per independent claims 1, 7, 13, Haderle rendered by the following:

- a) "allowing at least one system of the plurality of systems to fail" at Fig. 1, col. 5, lines 47-49;
- c) "restarting the at least one system utilizing minimal resources" at Fig. 1, col. 5, lines 53-57.

Haderle does not teach specifically retaining locks at the time of restarting the system after failure. However, Watts teaches the following:

- b) "retaining a plurality of locks of the at least one system" at Fig. 3, col. 7, line 65 to col. 8, line 14.

Thus, it would have been obvious to one ordinarily skilled in the art at the time of the invention to incorporate computer-programming instructions to convert nonstandard database record to a standard database record. Haderle and Watts are combined as they teach recovery techniques from database failure and to retain of locks during database restarting time. In order to REDO/UNDO process locks of the database must be retained at

the time of restarting system from failure state...

As per independent claim 19, Haderle rendered by the following:

a) "allowing at least one system of the plurality of systems to fail" at Fig. 1, col. 5, line s47-49;

c) "restarting the at least one system using only resources that are necessary for recovering the data protected by the plurality of locks" at Fig. 1, col. 5, lines 53-60.

Haderle does not teach specifically retaining locks at the time of restarting the system after failure. However, Watts teaches the following:

b) "retaining a plurality of locks of the at least one system" at Fig. 3, col. 7, line 65 to col. 8, line 14.

Thus, it would have been obvious to one ordinarily skilled in the art at the time of the invention to incorporate computer-programming instructions to convert nonstandard database record to a standard database record. Haderle and Watts are combined as they teach recovery techniques from database failure and to retain of locks during database restarting time. In order to REDO/UNDO process locks of the database must be retained at the time of restarting system from failure state...

In the section "Response to Arguments", the examiner states:

First, the applicant stated as "However, Haderle does not teach the step of 'restarting the at least one system utilizing minimal resources' as recited in independent claim 1."

In response to the applicant's argument, Haderle teaches restarting the system automatically in response to the failure, or waits for a user command to restart, the recovery mechanism makes an analysis pass through the log from the last check-point forward (at Fig. 1, col. 5, lines 54-60). In the specification of the invention did not list the minimal resources (see page 3, lines 18-21) in order to do thorough investigation. Whereas Watts teaches retaining locks to recover the system from failure (at Fig. 3, col. 7, line 65 to col. 8, line 14).

Applicant respectfully disagrees as to the claims as amended. The present invention, as recited in newly added independent claims 23, 24, and 25, allows the restarting of the failed computer system using only the shared processor resources that are necessary for recovering the data protected by the plurality of locks held by the failed computer system at the time of failure. Resources that do not facilitate the recovery of the data are not used during the restart. Such resources include allowing the failed computer system to accept new work. (Specification p. 4, line 21 – p. 5, line 3)

Haderle discloses a method and apparatus to provide DBMS restart recovery that allows transactions to access data that does not have restart recovery work pending. Haderle states:

Regardless of the embodiment, the invention allows full recovery to be completed concurrent to the processing of new transactions requiring access to the database. An amount of restart recovery processing may be postponed until after the DBMS has begun accepting new work requests.” (Abstract)

Thus, in contrast to the present invention, Haderle allows resources other than that necessary for the recovery of the data that have restart recovery work pending to be used during the restart of the failed computer system. More specifically, during the restart, Haderle allows the failed computer system to accept new work. According to the present invention, resources to allow the failed computer system to accept new work is not used during the restart since this resource is not necessary for recovery the data protected by the retained locks. This allows a significant reduction in the CPU resources and storage requirements for performing the restart, and the restart can be performed significantly faster. (Specification p. 4, line 21 – p. 5, line 3) Haderle cannot provide such advantages.

Therefore, even if Watts teaches the limitation as argued by the examiner, Haderle in view of Watts still does not teach or suggest restarting the at least one computer system using only shared processor resources determined to be necessary for performing the restart operation, in combination with the other recited elements in newly added independent claims 23, 24, and 25.

Therefore, for the above identified reasons, the present invention as recited in independent claims 23-25 is neither taught nor suggested by Haderle in view of Watts. Applicant further submits that claims 2-3, 5-6, 8-9, 11-12, 14-15, and 17-18 are also allowable because they depend on the above allowable base claims.

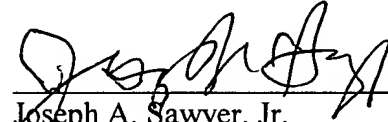
In view of the foregoing, Applicant submits that claims 2-3, 5-6, 8-9, 11-12, 14-15, 17-18, and 23-25 are patentable over the cited references. Applicant, therefore, respectfully requests reconsideration and allowance of the claims as now presented.

The prior art made of record and not relied upon has been reviewed and does not appear to be any more relevant than the applied references.

Applicants' attorney believes this application in condition for allowance. Should any unresolved issues remain, Examiner is invited to call Applicants' attorney at the telephone number indicated below.

Respectfully submitted,

December 17, 2003

  
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